

CLAIM SUMMARY DOCUMENT

WO 2004/058409 ————— PCT/EP2003/014665

————— CLAIMS:

1. (Currently Amended) ~~Solid bowl helical conveyor centrifuge, comprising~~  
————— ~~a rotatable drum (3) having a particularly horizontally oriented axis of rotation,~~  
————— ~~a rotatable worm (5) arranged in the drum (3),~~  
————— ~~at least one discharge opening (17) oriented at an angle with respect to the axis of~~  
~~rotation of the solid bowl helical conveyor centrifuge, for discharging solids from the drum~~  
~~(3) in the shell of the drum (3),~~  
————— ~~an adjusting device being assigned to the at least one discharge opening (17), by~~  
~~means of which adjusting device the outlet cross-section for the solids can be changed,~~  
————— ~~in addition, the adjusting device having a movable adjusting disk (25) arranged in~~  
~~the drum (3) as an extension of the worm (5), which adjusting disk (25) is non-rotatably~~  
~~connected with the drum (3), the worm (5) or the worm body (29),~~  
characterized in that

————— ~~at least one or more connecting rod(s) (27) is/are fastened to the adjusting disk~~  
~~(25).~~ A solid bowl helical conveyor centrifuge, comprising:

a rotatable drum having a horizontally-oriented axis of rotation;

a rotatable screw arranged in the rotatable drum;

at least one discharge opening oriented at an angle with respect to the  
horizontally-oriented axis of rotation, the at least one discharge opening configured to  
discharge solids from the rotatable drum;

an adjusting device assigned to the at least one discharge opening, by which  
adjusting device an outlet cross-section of the at least one discharge opening is changeable  
and the adjusting device includes a movable adjusting disk arranged in the rotatable drum as  
an extension of the rotatable screw, and which movable adjusting disk is non-rotatably  
connected with one or more of the following: a) the rotatable drum, b) the rotatable screw,  
and c) a screw body; and

at least one connecting rod fastened to the movable adjusting disk.

2. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to Claim 1, ~~wherein characterized in that the~~ at least one discharge openings (17) in the ~~drum shell extend~~ opening extends radially to the ~~toward an~~ outside of the drum.

3. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that the~~ Claim 1, wherein an end of the at least one connecting rod (27) facing away from the movable adjusting disk (25) is one of directly or and indirectly connected with one of a rod (35) or and a pipe which centrically penetrates an inlet pipe (7) in the horizontally-oriented axis of rotation of the solid bowl helical conveyor centrifuge.

4. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the at least one ~~or more connecting rods (27) are~~ rod is guided through the ~~worm (5)~~ rotatable screw from the ~~an~~ end of the rotatable drum (3) situated opposite a drive of the helical conveyor centrifuge.

5. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that the~~ Claim 1, wherein an end of the at least one connecting rod (27) facing away from the movable adjusting disk (25) is fastened to a ring (31) which is disposed by ~~means of a bearing (33) on a~~ stationary connecting rod (35) which centrically penetrates an inlet pipe (7) in the horizontally-oriented axis of rotation of the solid bowl helical conveyor centrifuge.

6. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~the one the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) is oriented radially with respect to the horizontally-oriented axis of rotation of the solid bowl helical conveyor centrifuge.

7. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) is arranged as an axial extension of an end of the rotatable drum end in a discharge chamber (15) axially adjoining the worm screw.

8. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) is axially displaceable in the rotatable drum (3).

9. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) has a configured to be swivellable construction.

10. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) is swivellably linked to the an axial worm end of the screw.

11. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the at least one connecting rod includes three connecting rods (27) are fastened to the adjusting disk (25).

12. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the at least one connecting rods (27) penetrate the rod penetrates an axial end of the worm at least one of the following: a) the screw body (29) or and b) a worm screw drive shaft (41) of the worm (5) screw into a chamber (28) in the worm screw body (29).

13. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the at least one or more connecting rods (27) are rod is guided from the a cylindrical end of the rotatable drum (3) through the worm (5) screw.

14. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 12, wherein the chamber (28) adjoins the distributor.

15. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) ~~can be adjusted~~ is adjustable by means of an electromotively operable adjusting unit.

16. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable adjusting disk (25) ~~can be adjusted~~ is adjustable by means of ~~at least one of the following: a) a~~ an hydraulic device or and b) a pneumatic device.

17. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 5, wherein the stationary connecting rod ~~can be~~ is operated by means of ~~the~~ at least one of the following: a) an electromotively operable adjusting unit ~~or the~~ and b) an hydraulic device.

18. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 5, wherein the ring (31) is constructed as a sliding element (39) ~~which can be operated~~ operable by a fluid.

19. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein a pipe (37) ~~penetrating the~~ penetrates an inlet pipe (7) for the ~~centrifuged material~~ to be centrifuged and leads into a chamber (28) used as a feeding and removing device for the operating fluid.

20. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 1, wherein the movable

adjusting disk ~~has~~ includes recesses.

21. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 19, wherein the inlet pipe (7) ~~does not rotate along with the worm~~ (5) screw.

22. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized in that~~ Claim 19, wherein the inlet pipe (7) rotates along with the ~~worm~~ (5) screw.

23. (Cancelled)

24. (Currently Amended) ~~Solid~~ The solid bowl helical conveyor centrifuge according to ~~one of the preceding claims, characterized by~~ Claim 1, further including a computer-controlled control device for controlling the movable adjusting disk, ~~particularly as a function of the dry substance content of the solids.~~

25. (New) The solid bowl helical conveyor centrifuge of Claim 11, wherein the three connecting rods penetrate an axial end of at least one of a) a screw body and b) a screw drive shaft of the screw into a diameter in the screw body.

26. (New) The solid bowl helical conveyor centrifuge of Claim 24, wherein the computer-controller control device controls the movable adjusting disk as a function of a dry substance content of the solids.